Report on
A
Workshop
Design and analysis of control systems using MATLAB/Simulink
Organised by
Department of Electrical and Electronics Engineering
24-1-2018 to 25-1-2018

Submitted by: **Dr. Lakshmanan S A, Sr. Assistant Professor, Dep of EEE, MITS-Madanapalle.**
Resource Person: **Dr M. Chakkrapani, Sr. Assistant Professor., Dept. of EEE, MITS-Madanapalle. Attended: III B-Tech EEE students & Faculty members Venue: QEEE Seminar Hall**

The workshop was started at 10 a.m. the resource person **Dr M. Chakkrapani,** was introduced by Dr. Asha Rani M A, HOD, Dept. of EEE. The speaker has highlighted the importance of MATLAB/Simulink software and how to design, test, and implement control systems using the same. The resource person has delivered the following topics in the area of control systems.

1. Introduction to MATLAB/ SIMULINK software
2. Modelling of DC Motor and validation of its characteristics
3. Stability analysis of LTI system using Bode, Root Locus and Nyquist plots
4. Compensator design and simulation using MATLAB- PI and PID controllers
5. Controller design for MIMO systems
6. Introduction to state space analysis
7. State feedback Controller design for Inverted-pendulum
8. Study of stable and unstable limit cycle behaviour of nonlinear system

Feedback: The students and faculty were too enthusiastic to learn about the MATLAB/Simulink

software and they have analysed stability of linear and non-linear system. In addition, the students were designed controllers for various systems.

Finally, the resource person was felicitated by two of III-year EEE students and Dr Asha Rani M A, HOD EEE dept.